



01 August 2018

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U.S. EPA Office of Pesticide Programs (7505P)
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RE: Crisis exemption for emergency use of sulfoxaflor (Transform® WG) for control of plant bugs, *Lygus* spp., in alfalfa grown for seed in Oregon in 2018. EPA File Symbol 18-OR-02.

Section 18 of FIFRA provides that the Administrator may, at his discretion, exempt any state or federal agency from provisions of FIFRA if he determines that emergency conditions exist which require such exemption.

Title 40, Part 166 of the Code of Federal Regulations provides criteria for crisis exemptions. The Oregon Department of Agriculture (ODA) hereby notifies your Agency of such a crisis exemption, beginning at 2:00 PM** (Pacific Daylight Time) on 01 August 2018, for the use of sulfoxaflor (Transform® WG, EPA Reg. No. 62719-625) for control of plant bugs, *Lygus* spp., in alfalfa grown for seed in Oregon.

**Note: Actual applications of Transform® WG in alfalfa seed fields not to begin until after sunset (local time) on 01 August 2018.

Reason for this Crisis Exemption

ODA was contacted in early 2018 about the possibility of requesting a Section 18 emergency exemption for this use for the 2018 growing season. Growers continually have major problems controlling *Lygus* bugs, which feed on blossoms, setting seeds, and seed pods of alfalfa, and can subsequently reduce seed yield at harvest by as much as 75% or more. Unfortunately, alfalfa bloom and peak pollinator activity coincide with *Lygus* bug population outbreaks, so it is a serious challenge for growers to protect their crop from *Lygus* during pollination, while at the same time causing minimal harm to their valuable pollinators (primarily leafcutting bees).

The difficulty for growers in controlling *Lygus*, which are very prone to developing resistance/tolerance to insecticides because of the frequent and necessary use, is evidenced by the fact that ODA currently has seven different FIFRA Section 24(c) Special Local Need registrations for products to control *Lygus*. We also had a short-lived SLN registration for use of Transform® WG in 2015, EPA SLN No. OR-150010, prior to EPA cancellation of all sulfoxaflor registrations as a result of a court decision. Sulfoxaflor was used very successfully for *Lygus* control during bloom, as one of a very limited number of products that can be used with minimal adverse effects to pollinators. The other products currently used during bloom/pollination are flonicamid/Beleaf (2 applications allowed) and novaluron/Rimon, under one of the current SLN registrations (4 applications allowed).



Unfortunately, Oregon does not currently have university research/extension personnel that focus on the alfalfa seed crop, so we were unable to completely develop and submit a specific exemption request for 2018. Even so, the growers have been surviving with available Lygus controls through mid-July, because of lower Lygus pressure than normally expected up until this time. For example, the growers consider Lygus populations tolerable to a threshold of about 2-3 adults/nymphs collected with a standard sweep net per 180° sweep. Up until last week (~ July 25), they had been able to maintain populations to a level of 2-4 Lygus per sweep.

However, it was reported to ODA on July 25 that levels in the fields in the Malheur County growing area were now at 7-10 Lygus per 180° sweep. The growers have almost completely exhausted their available uses of products that can be safely used during pollination, and are extremely concerned about significant yield losses now, without emergency use of sulfoxaflor/Transform®. The current emergency situation can be summarized as follows.

1. Leafcutting bees are still pollinating in many fields and will probably continue for a couple more weeks. Pollination is going longer than normal this year because of much cooler than normal weather during the spring, which resulted in the alfalfa plants remaining in vegetative (rather than reproductive) growth much later into the summer and delaying the onset of flowering.
2. At the same time, growers have almost completely exhausted the allowed applications of the two primary alternatives that can safely be used during pollination (flonicamid/Beleaf and novaluron/Rimon). They will not be able to use alternatives such as pyrethroids, much harsher on bees, for at least 2 more weeks as pollination continues.
3. The situation is exacerbated by the alfalfa plants being much taller (12"-18" taller) and with more robust foliage than normal this year, because of the extended period of vegetative, rather than reproductive, growth during the extended cool period in the spring. (For example, high temperatures in eastern Oregon were in the 70°F/80°F range during much of June, when highs in the 90°F range are more typical.) The thicker plant canopy has made insect control a greater challenge than normal (e.g., harder to get applied insecticides distributed to lower parts of the plants), and has resulted in faster depletion of available control options.
4. Some growers' fields have nearly completed the pollination phase, and those growers are now able to either (1) temporarily remove their bees from the fields and then apply harsher insecticides such as lambda-cyhalothrin/Warrior or naled/Dibrom (or leave bees in the fields and absorb about 30-40% pollinator loss by limiting application rates to 1/2 the usual rate of these products), or (2) willingly sacrifice their remaining pollinators and apply even harsher insecticides such as chlorpyrifos/Lorsban or dimethoate in order to achieve final kill of insect pests and provide residual control through to the time of harvest.
5. However, for those fields that had delayed bloom and a greater degree of vegetative growth than normal, pollination is expected to continue for at least another 2-3 weeks, and these growers are now facing the possibility of losses up to an estimated 30-35% of yield, without one or two additional applications of a product such as sulfoxaflor that can be safely used during pollination.

Harvest of Alfalfa Grown for Seed in Oregon

Harvest of the alfalfa seed crop in Oregon begins approximately August 20 and extends until about September 20. The earliest harvest is from the earliest blooming fields, and it is likely these fields are already past the pollination phase of production, with bees already removed or willingly sacrificed by use of harsher insecticides such as chlorpyrifos (Lorsban) or dimethoate in order to achieve final kill of insect pests and provide residual control through to the time of harvest.

Alfalfa seed fields still in the pollination phase and likely to be treated with Transform® WG under this exemption would not be harvested until approximately September 1.

Conditions of this Crisis Exemption

1. Pesticide to be used: Transform® WG, EPA Reg. No. 62719-625, a water dispersible granule formulation containing 50% active ingredient, **sulfoxaflor** (CAS No. 946578-00-3): **{N-methyloxido[1-[6-(trifluoromethyl)-3-pyridinyl]ethyl]-λ⁴-sulfanylidene]-cyanamide}**. The registrant is Dow AgroSciences LLC; Indianapolis, Indiana.
2. Sites and acreage to be treated: Transform® WG may be applied to a maximum of 7,000 acres of alfalfa grown for seed under this exemption, located within the following counties in eastern Oregon: Deschutes, Harney, Jefferson, Malheur, Morrow, Umatilla, and Union.
3. Pest to be controlled: Plant bugs, *Lygus* spp.
4. Method, number, rate, and timing of applications:
 - a. Apply Transform® WG in a broadcast spray at the rate of 1.5 - 2.75 oz. (0.047 - 0.086 lb. a.i. sulfoxaflor) per acre, in a minimum of 15 gallons of water per acre.
 - b. Applications may be made by ground equipment only.
 - c. Apply at night, between sunset and four (4) hours before sunrise, when bees are not actively foraging in alfalfa grown for seed. Do not apply between four (4) hours before sunrise and sunset.
 - d. A maximum of two (2) applications may be made under this exemption, with a minimum of seven (7) days between applications.
 - e. A maximum of 2,406 lb. of Transform® WG (1,203 lb. a.i. sulfoxaflor) would be required for treatment of a maximum of 7,000 acres of alfalfa grown for seed, if two applications were made at the maximum rate (2.75 oz. product per acre) per application.
5. Environmental Hazards, Spray Drift Management, and Advisory Pollinator Statements: Use under this exemption must comply with the following, which are included in the Section 18 Use Directions (see Attachment #2).
 - **Environmental Hazards Statement**: This product is highly toxic to bees exposed through contact during spraying and while droplets are still wet. This product may be

toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry.

- **Advisory Pollinator Statement:** Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect their bees. Avoid applications when environmental conditions (e.g., dew, fog or precipitation) may prolong the drying time of spray residues. Growers are advised to and, where feasible, observe the cooperative standards outlined in the Oregon Bee Project Strategic Plan for additional guidance and bee conservation stewardship efforts. (<https://www.oregon.gov/ODA/programs/Pesticides/Documents/OregonBeeProjectStrategicPlan.pdf>)
- **Spray Drift Management:** To minimize spray drift and potential exposure to bees when foraging on plants adjacent to treated fields, applications are prohibited when wind speeds are above 10 miles per hour (mph). Follow other applicable restrictions and precautions on the federal label for Transform® WG, EPA Reg. No. 62719-625, regarding spray drift management.

6. Special Crop Use Restrictions: Alfalfa grown for seed is regulated as a nonfood/nonfeed crop under Oregon Administrative Rule (OAR) 603-057-0535, Pesticide Use On Crops Grown For Seed. The following "Special Crop Use Restrictions" statements, which are included in the Section 18 Use Directions (Attachment #2), are reflective of the rule.

Special Crop Use Restrictions

The pesticide applicator, the producer of the crop, and the seed conditioner must be aware that use of this product according to this labeling is deemed a non-feed/non-food use by the Oregon Department of Agriculture, and is regulated by the Oregon Administrative Rule (OAR) 603-057-0535, Pesticide Use On Crops Grown For Seed. If the applicator of this pesticide is not the producer, the applicator must provide a copy of this labeling to the producer of the crop. Producers of this crop who use this product, or cause the product to be used on a field they operate, must provide a copy of this pesticide label to the seed conditioner.

This pesticide does not have an established pesticide residue tolerance for this crop. Consequently, no portion of this seed may be used or distributed for food or feed for 1 year (365 days) after the last application of this product. This restriction pertains to, but is not limited to, green chop, forage, hay, pellets, meal, whole seed, cracked seed, straw, roots, bulbs, foliage or seed screenings, and to the grazing of the crop field, stubble or regrowth. All seed screenings shall be disposed of in such a manner that screenings cannot be distributed or used for food or feed purposes, as indicated in OAR 603-057-0535. Additional regulations concerning seed screenings are stated in OAR 603-057-0535.

Any seed from a field treated with this pesticide product shall bear specific and conspicuous container labeling, or if shipped in bulk, on the shipment invoice or bill of lading. The labeling shall contain the following statement:

"This seed was produced using one or more products for which the United States Environmental Protection Agency has not established pesticide residue tolerances. This seed, in whole, as sprouts, or in any form may not be used for human consumption or animal feed. Failure to comply with this condition may violate requirements of the Federal Food and Drug Administration, the Oregon Department of Agriculture and other regulatory agencies."

7. Use Restrictions: This crisis exemption is subject to the following additional conditions:

- All applicable directions, precautions, restrictions, and worker protection requirements on the registered federal label for Transform® WG, EPA Reg. No. 62719-625, must be followed.
 - Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.
 - Do not make more than two (2) applications per crop. Two applications per cutting is equivalent to two applications per year.
 - Do not make applications less than seven (7) days apart.
 - Do not apply more than a total of 5.5 oz. of Transform® WG (0.172 lb. a.i. sulfoxaflor) per acre per year.
 - Do not apply this product by aerial application or through any type of irrigation system.
 - Apply at night, between sunset and four (4) hours before sunrise, when bees are not actively foraging in alfalfa grown for seed. Do not apply between four (4) hours before sunrise and sunset.
 - Any adverse effects resulting from the use of Transform® WG under this crisis exemption must be immediately reported to the Oregon Department of Agriculture.
 - The Section 18 crisis exemption use directions (Attachment #2) must be in the possession of the user at the time of application.
8. Applications of Transform® WG under this exemption are authorized to begin after sunset (local time) on 01 August 2018. This exemption will expire on 15 August 2018.
9. The registrant of Transform® WG, Dow AgroSciences LLC, has been notified of this crisis exemption, and has provided a letter of support (see Attachment #1) and Section 18 Use Directions for this exemption (Attachment #2).
10. The Oregon Department of Agriculture maintains that this stand-alone crisis exemption will be sufficient to address this emergency situation and has no plans to pursue a specific exemption for this use in 2018. A final report summarizing the results of this crisis exemption use program will be submitted to EPA by 15 November 2018.

Please contact our office if you have any questions about this crisis exemption.

Sincerely yours,



David L. Priebe
State Registration Specialist
ODA Pesticide Program
Phone: (503)986-4656
Email: dpriebe@oda.state.or.us

Attachments

- #1. Letter of support, Dow AgroSciences LLC, 26 July 2018.
- #2. Section 18 Crisis Use Directions, Transform® WG on alfalfa grown for seed in Oregon in 2018.

cc: Edith Kressly, Oregon Alfalfa Seed Commission
Ryan Svaty, Idaho State Alfalfa & Clover Grower's Association
Curt Sisson, Malheur County Certified Seed Growers Association
Stuart Reitz, OSU Malheur County Extension
Darrin Walenta, OSU Union County Extension
Mylene Bohle, OSU – COARC
Rich Affeldt, Central Oregon Seed, Inc.
Jamey Thomas, Dow AgroSciences
Tami Jones-Jefferson, Dow AgroSciences
Harvey Yoshida, Dow AgroSciences
Jenica Hagler, Dow AgroSciences
Erik Johansen, Washington State Department of Agriculture
Sherman Takatori, Idaho State Department of Agriculture
Rose Kachadoorian, Pesticides Program Manager, ODA

**Dow AgroSciences****Dow AgroSciences LLC**9330 Zionsville Road
Indianapolis, IN 46163**dowagro.com**

July 26, 2018

Mr. David Priebe
State Registration Specialist
Oregon Department of Agriculture - Pesticides Program

Re: Support letter for Transform™ WG Section 18 on seed alfalfa

Dear Mr. Priebe,

Per your request, this letter is to confirm that Dow AgroSciences supports the pursuit of crisis exemption for Transform WG to control plant bugs, *Lygus* spp., on seed alfalfa in the state of Oregon. A tolerance petition has been submitted by Dow AgroSciences for alfalfa, but that use is not expected to be approved prior to the 2018 season.

Transform WG provides excellent efficacy against plant bugs and the active ingredient, sulfoxaflor, represents a new class of chemistry with a novel mode of action. As such it controls pests resistant to other classes of chemistry, among other benefits.

If you have questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jamey Thomas".

Jamey Thomas, Ph.D.
US Regulatory Manager
Dow AgroSciences

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Dow AgroSciences

Dow AgroSciences LLC

9330 Zionsville Road

Indianapolis, IN 46268-1054 USA

FIFRA Section 18 Emergency Exemption Use Directions

FOR DISTRIBUTION AND USE ONLY IN DESCHUTES, HARNEY, JEFFERSON, MALHEUR, MORROW,
UMATILLA, AND UNION COUNTIES IN THE STATE OF OREGON

Transform[®] WG

EPA Reg. No. 62719-625

For Control of Lygus Bugs in Alfalfa Grown for Seed

EPA Emergency Exemption File Symbol 18-OR-02

This Section 18 Emergency Exemption is effective 08/01/2018 and expires 08/15/2018.

Active Ingredient:

sulfoxaflor	50%
Other Ingredients.....	50%
Total	100%

Contains 50% active ingredient on a weight basis.

Keep Out of Reach of Children

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling.
- These Section 18 Use Directions must be in the possession of the user at the time of application.
- Follow all applicable directions, restrictions, Worker Protection Standard requirements, and precautions on the federal label for Transform WG, EPA Reg. No. 62719-625.
- Any adverse effects resulting from the use of Transform WG under this Section 18 emergency exemption must be immediately reported to the Oregon Department of Agriculture.

Directions for Use: Alfalfa Grown for Seed

Transform WG may be applied to control Lygus bugs (*Lygus* spp.) in a maximum of 7,000 acres of alfalfa grown for seed in Deschutes, Harney, Jefferson, Malheur, Morrow, Umatilla, and Union counties in Oregon.

Application Rate: Apply 1.5 – 2.75 oz. Transform WG (0.047 – 0.086 lb. a.i. sulfoxaflor) per acre, in a minimum of 15 gallons of water per acre, using ground equipment only.

Use a higher rate in the rate range for heavy pest populations.

A maximum of two applications may be made per year, but no more than 5.5 oz. of product (0.172 lb. a.i.) may be applied per acre per year. Two applications per cutting is equivalent to two applications per year.

Application Timing: Treat in accordance with local economic thresholds. Consult your Dow AgroSciences representative, cooperative extension service, certified crop advisor or state agricultural experiment station for any additional local use recommendations for your area.

Environmental Hazards Statement: This product is highly toxic to bees exposed through contact during spraying and while spray droplets are still wet. This product may be toxic to bees exposed to treated foliage for up to 3 hours following application. Toxicity is reduced when spray droplets are dry.

Advisory Pollinator Statement: Notifying known beekeepers within 1 mile of the treatment area 48 hours before the product is applied will allow them to take additional steps to protect bees. Avoid applications when environmental conditions (e.g., dew, fog or precipitation) may prolong the drying time of spray residues. Growers are advised to refer to and, where feasible, observe the cooperative standards outlined in the Oregon Bee Project Strategic Plan for additional guidance and bee conservation stewardship efforts.

Spray Drift Management: To minimize spray drift and potential exposure to bees when foraging on plants adjacent to treated fields, applications are prohibited when wind speeds are above 10 miles per hour (mph).

Restrictions:

- Follow all applicable directions, restrictions, Worker Protection Standard requirements, and precautions on the federal label for Transform WG (EPA Reg. No. 62719-625).
- These emergency exemption use directions must be in the possession of the user at the time of application.
- Do not enter or allow worker entry during the restricted entry interval (REI) of 24 hours.
- Do not make applications less than 7 days apart.
- Do not make more than two applications per crop. Two applications per cutting is equivalent to two applications per year.
- Do not apply more than a total of 5.5 oz. of Transform WG (0.172 lb. a.i. sulfoxaflor) per acre per year.
- Do not apply within 7 days of harvest.
- Do not apply this product by aerial application or through any type of irrigation system.
- Apply at night, between sunset and four hours before sunrise, when bees are not actively foraging in alfalfa grown for seed. Do not apply between four hours before sunrise and sunset.
- Any adverse effects resulting from the use of Transform WG under this Section 18 emergency exemption must be immediately reported to the Oregon Department of Agriculture.

Special Crop Use Restrictions

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